



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/595,330

04/10/2006

Patrick J. Maas

CU-7455

7603

26530 7590 12/22/2010
LADAS & PARRY LLP
224 SOUTH MICHIGAN AVENUE
SUITE 1600
CHICAGO, IL 60604

EXAMINER

BURCH, MELODY M

ART UNIT

PAPER NUMBER

3657

MAIL DATE

DELIVERY MODE

12/22/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/595,330	MAAS, PATRICK J.	
	Examiner	Art Unit	
	Melody M. Burch	3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation of the coil springs being attached to each leaf spring end as recited in claim 8 and helper spring 70 recited in claim 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Examiner notes that top and bottom surfaces and the side edges of the leaf springs are not substantially parallel. For example, the side edges of the leaf spring in the V arch are not substantially parallel because the sides of a V-shaped arch when extrapolated would intersect with one another. Intersecting lines are not substantially parallel to each other. Examiner notes that reference character "70" is not shown in figure 5 as described in the instant specification.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

Art Unit: 3657

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Claim Objections

3. Claim 10 is objected to because of the following informalities: the phrase "each leaf springs" should be reworded. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6, 7, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 6. The phrases "one W arch" and "a V or front W arch" are indefinite. It is unclear to the Examiner whether Applicant intends for the W and V arches of claim 6 are intended to be the same or different from those recited in claims 1, 11, and 12.

Re claim 6. The phrase "a said substantially flat" is indefinite. It is unclear to the Examiner what the metes and bounds of the claim are.

Re claim 7. The phrase "a helper spring" is indefinite with respect to claim 11. It is unclear to the Examiner whether the helper spring in claim " is intended to be the same or different from that recited in claim 11.

Re: claims 7 and 10. The phrase "leaf spring" in line 6 from the bottom of claim 7 is indefinite. It is unclear to the Examiner as to whether the leaf spring in claim 7 is intended to be the same or different from one of the earlier recited leaf springs. A similar issue exists with respect to the "helper spring" phrase in line 4 from the bottom of claim 7 and the "helper springs" phrase in line 5 of claim 10.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 4, 8, 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5269497 to Barth in view of US Patent 3248745 to Gunlock and US Patent 6158815 to Sugie et al.

Art Unit: 3657

Re: claims 1, 2, 4, 8, 9, and 12. Barth shows in figures 1 and 2 a seat spring assembly comprising: a frame 10,12 having a first and a second frame end with first and second sides connected to first and second transverse frame ends as shown; a plurality of flat leaf springs 18 having leaf spring first ends connected to the first frame end and leaf spring second ends connected to the second frame end; each leaf spring having one V arch adjacent the leaf spring first end and one shaped arch adjacent the leaf spring second end; each leaf spring has a substantially flat center portion 32 extending longitudinally and aligned horizontally to define a seating support surface.

Barth is silent with regards to the shaped arch adjacent the second end of the leaf spring being a W arch.

Gunlock teaches in col. 2 lines 22-25 a seat spring assembly wherein each spring has a V arch adjacent a first end of the spring and a W arch adjacent a second end of the spring.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shape of the arch at the opposite end of the leaf spring of Barth to have been a W, as taught by Gunlock, in order to provide a means of achieving a desired vertical deflection of the spring depending on the particular application.

Barth, as modified, is silent with regards to a cross piece and a plurality of coil springs as recited.

Sugie et al. teach in figure 8 the use of a seat spring assembly including a cross piece 24, the cross piece spanning and substantially perpendicularly interconnecting

Art Unit: 3657

second ends of leaf springs 22, the leaf spring second ends being attached to the cross piece, and a plurality of coil springs, the coil springs connecting the cross piece to a frame end 20 to transmit loads from the interconnected leaf springs through the coil springs to the second frame end.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the spring assembly of Barth, as modified, to have included a cross piece as recited and a plurality of coil springs as recited, as taught by Sugie et al., in order to provide added resilience and support to accommodate the seat spring assembly user. As best understood with regards to claim 12, Barth, as modified, shows substantially parallel top and bottom surfaces and side edges to the same extent as Applicant's invention. See 112 rejections above.

Re: claim 4. Alternately, in *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) the court held that the configuration of a claimed object was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration is significant.

8. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5269497 to Barth in view of Gunlock and Sugie et al. and further in view of US Patent 3156460 to Santillo.

Re: claims 1-4 and 7-11. Barth, as modified, as set forth in the rejection above of claim 1 is silent with regards to the helper spring.

Santillo teaches in figures 2 and/or 3 the use of a helper spring 63.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the configuration of the leaf springs of Barth, as modified, to have included a helper spring, as taught by Santillo, in order to provide a means of reinforcing the support for the seat. With regards to claim 7, Santillo teaches the use of the mounting plates 11 and 12. It would have been obvious to one of ordinary skill in the art to have modified the assembly of Barth, as modified, to have included mounting plates, as taught by Santillo, in order to connect the frame to the remaining portion of the seat.

Re: claim 5. Barth, as modified, teaches in figures 1 and 2 the limitation wherein there are 4 leaf springs for each seating, but is silent with regards to the dropped center position formed in the frame.

Santillio teaches in figures 1 and 3 the frame including the dropped center position shown in the area of element 25.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the frame of Barth, as modified, to have modified the seat assembly of Barth, as modified, to have included a drop center position, as taught by Santillo, in order to provide adequate space to resiliently accommodate a user for added comfort.

Re: claim 6. Barth, as modified, is silent with regards to the frame being U-shaped.

Santillo teaches in figure 1 the use of a U-shaped frame.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shape of the frame of Barth, as modified, to have been U-shaped, as taught by Santillo, in order to provide a means of accommodating a particular seat shape. In *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) the court held that the configuration of a claimed object was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration was significant.

Response to Arguments

9. Applicant's arguments filed 10/13/10 have been fully considered but they are not persuasive.

Examiner notes that the drawing objections have been maintained since Applicant has failed to provide both replacement and annotated drawings as required in paragraphs 2 and 3 of the non-final Office action. With regards to the parallel limitation, Examiner agrees that curved lines may be parallel and has withdrawn the corresponding drawing objection and the 112 first rejection.

With regards to the 103 rejections, Applicant first argues that Gunlock is not fairly combinable with the base reference because "Gunlock uses a much different approach – bent wire torsion springs that look like a 'W' only if you are looking at a particular elevation." Examiner disagrees. Barth explicitly teaches in col. 2 lines 22-25 a seat spring having a V arch adjacent a first end and a V arch adjacent a second end. Gunlock is used to teach that a seat spring may be modified to have a configuration in

Art Unit: 3657

which a V arch is adjacent a first end and a W arch is adjacent a second end. Examiner maintains that the references are fairly combinable since they are both directed to seat spring assemblies and since it may be desired to achieve varying support characteristics depending on application by altering the spring configuration.

Applicant then argues that the Sugie and Gunlock references do not have leaf springs and that there is no reason one would take their all-wire structures and combine them with the leaf springs of Barth. In response to applicant's argument that there is no reason to take the all-wire structures and combine them with the leaf springs of Barth, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, Examiner is not suggesting that the all-wire structures be bodily incorporated in and combined with the leaf springs of Barth. Instead, the combination suggests that it would have been obvious to one of ordinary skill in the seat spring assembly art to have modified one of the ends of the leaf springs of Barth to have been connected to a cross piece spanning and substantially perpendicularly interconnecting the ends of the leaf springs and to have connected the cross piece to a plurality of coil springs to ultimately be attached to the frame as taught by Sugie. Sugie clearly shows in figure 1 a spring assembly 12 including a cross piece 24 and a plurality of coil springs 26 arranged as claimed. Since Barth already satisfies the limitation of the spring

Art Unit: 3657

assembly including leaf springs and since Sugie is relied upon solely for the cross piece and the coil springs, the fact that Sugie includes a spring assembly in the form of a steel spring grid unit is irrelevant. Nevertheless, it's worth noting that Sugie suggests that the spring assembly shown is not intended to be limiting by mentioning in col. 4 line 66 through col. 5 line 2 that various types of springs may be used in place of the illustrated grid. Barth, as modified by Sugie, teaches leaf spring ends being attached to a cross piece so that the flat leaf springs 18 are supported solely at the first end (by rivets 24 to frame 12) and the second end (by way of the cross piece 24 and coil springs 26 to the opposite side of the frame) as the amended claims recite.

With regards to claim 11, Applicant argues that element 63 is not a helper spring. In light of the amendments, Examiner notes that in an alternate interpretation Santillo teaches a helper spring 46, 55 being attached at one helper spring end shown near element 47 between a first leaf spring end and a frame end and the helper spring other end 56 projecting below its respective leaf spring 42 and extending for a length less than the length of the leaf spring as the amended claim recites.

Accordingly, the above rejections have been maintained.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 3657

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb

Application/Control Number: 10/595,330

Page 12

Art Unit: 3657

December 18, 2010

/Melody M. Burch/

Primary Examiner, Art Unit 3657